

**REMARKS**

This Amendment, submitted in response to the Office Action dated December 27, 2006, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-24 are all the claims pending in the application.

**I. Rejection of claims 1-3, 10-13, 17-18, and 21 under 35 U.S.C. § 103**

Claims 1-3, 10-13, 17-18, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lien et al. (U.S. Patent No. 5,386,567) in view of Clark (U.S. Patent No. 5,448,045).

As a preliminary matter, Applicant submits that where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it. (MPEP 707.07(f) "Answer All Materials Traversed"). Applicant notes that the Examiner did not address Applicant's arguments with respect to the Examiner's rejection of claims 2, 3, 5, 6, 8, 9 and 10, as submitted in the Amendment filed November 2, 2006. Consequently, Applicant requests that the Examiner address all of Applicants' arguments as submitted in the Amendment filed November 2, 2006, which Applicant repeats herein for the Examiner's convenience.

**Claim 1**

Claim 1 recites "at least one interface card, detachably mounted in the extension slot, operable to load built-in driver programs and environmental setting values to the operating system when the computer system is booted in a state that the interface card connects with the

extension slot.” Therefore, as recited in the claim, the computer system is booted and an interface card connects with an extension slot.

The Examiner concedes that Lien does not disclose that the computer system is booted in a state that the interface card connects with the extension slot and cites Clark to cure the deficiency. In particular, the Examiner asserts that Clark discloses at col. 9, lines 26-36, that an expansion card is connected to an expansion slot and the expansion BIOS is loaded from the expansion card. However, there is no teaching or suggestion that for example, built-in driver programs are loaded to the operating system. Merely because BIOS functions are loaded does not teach or suggest the loading of built-in driver programs. For example, the drivers could be installed at a later time. Consequently, Clark does not cure the deficiencies of Lien.

In response to Applicant’s arguments, the Examiner asserts that it would be obvious to load all the software needed for proper operation of the extension card which would include driver programs and settings. However, the Examiner’s statement appears to be based primarily on the Examiner’s own reasoning and is not based on the prior art. There is no teaching or suggestion that the computer system is booted in a state that the interface card connects with the extension slot in the references cited by the Examiner. It is likely that the drivers are installed when the computer system is in a running state. Therefore, unless the Examiner can cite another reference, the current references cited by the Examiner do not teach loading built-in driver programs and environmental setting values to the operating system when the computer system is booted in a state that the interface card connects with the extension slot, as claimed.

The Examiner concedes that Lien is only directed to a Hot/Live/Powered insertion and is silent upon Cold/depowered insertion. The Examiner asserts that it is theoretically possible to only support Hot insertion thus requiring removing an adapter. Applicant submits that as clearly indicated in the title of Lien, Lien is directed to a hot removable and insertion of attachments on fully initialized computer systems. Therefore, it is not theoretical that Lien is merely directed to a Hot insertion, but it is clearly indicated in the title and specification of Lien that Lien is only directed to Hot insertion. The Examiner is clearly making assumptions on the reference based on the Applicant's invention. There is absolutely no teaching or suggestion in Lien of operations performed during a booted state. Therefore, assuming Lien teaches the loading of built-in driver programs and environmental setting values to an operating system it would not be when the computer system is booted in a state that the interface card connects with the extension slot.

Moreover, as previously submitted, the combination of Clark with Lien is not obvious. As indicated, the computer system of Lien is not directed to operations in a booted state. In particular, the addition of an adapter in Lien occurs when a computer is fully powered up and initialized and is running or is immediately capable of running an application program. See col. 4, lines 63-65. Therefore, at no point would any kind of built-in driver programs or environmental setting values be loaded to the operating system when the computer is booted, since the focus of Lien is to attach an adapter while the computer is in a fully running state.

Moreover, it would not be obvious to modify Lien to include the teachings of Clark. In particular, Lien specifically states that the computer system is in a fully powered up and initialized state and therefore, not in a booted state. Consequently, modifying Lien to include the

teachings of Clark would result in a substantial modification of the principle of operation of Lien, evidencing that the Examiner's reasoning is merely a result of impermissible hindsight. MPEP 2143.01.

Further, the Examiner's assertions regarding how the system of Lien would operate if the system was in a booted state is clearly a result of impermissible hindsight. In particular, Lien is not at all concerned with the insertion of the adapter 2 during a booted state. Any suggestion by the Examiner that Lien operates in a booted state similar to the Applicant's invention is clearly a result of impermissible hindsight. Further, Clark does not cure the deficiencies of Lien.

For at least the above reasons, claim 1 and its dependent claims should be deemed allowable. To the extent claims 10 and 17 recite similar elements, claims 10 and 17 and their dependent claims should be deemed allowable for at least the same reasons.

#### **Claim 2**

Claim 2 recites "a memory device operable to store the driver programs when said driver programs make the interface module recognized to the operating system and the environmental setting values." The Examiner asserts that adapter attribute information storage 13 stores the driver programs. However, as illustrated in Lien Fig. 5, the drivers 17 are not stored in the adapter 2, let alone, in the adapter attribute information storage 13 of adapter 2. The adapter attribute information storage 13 stores, for example, I/O address, memory address and interrupt level. See Fig. 7, S7. However, there is no teaching or suggestion that adapter attribute information storage 13 stores the driver programs.

For at least the above reasons, claim 2 and its dependent claims should be deemed allowable.

**Claim 3**

Claim 3 recites "wherein the memory device is divided into first and second partitions, and the driver programs and the environmental setting values are stored in the first and second partitions." The Examiner concedes that Lien does not specifically disclose the memory being partitioned and therefore takes Official Notice citing Crossway et al. (USP 5,325,532) in support.

However, as discussed above with respect to claim 2, there is no teaching or suggestion that adapter attribute information storage 13 (memory as asserted by the Examiner) stores the driver programs. Therefore, assuming *arguendo* Crossway teaches the claimed partitioning and the attribute information storage 13 of Lien could be partitioned, there is no teaching or suggestion that a first and a second partition would store the driver programs and the environmental setting values. Further, there is no reason to partition the attribute information storage 13 of Lien so that a first and a second partition would store the driver programs and the environmental setting values. The Examiner's reasoning is clearly a result of impermissible hindsight.

For at least the above reasons, claim 3 and its dependent claims should be deemed allowable. To the extent claim 13 recites similar elements, it should be deemed allowable for at least the same reasons.

**Claim 10**

The Examiner rejects claim 10 for the same reasons as claim 1. However, claim 10 recites "a connection unit detachably mounted in the extension slot" which is not disclosed in claim 1. Since the Examiner has not established where this aspect of the claim is disclosed in the cited art, and the art cited by the Examiner does not disclose the aspects of claim 10, claim 10 should be deemed allowable.

**II. Rejection of claims 4-6, and 14-16 under 35 U.S.C. § 103**

Claims 4-6, and 14-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lien et al. (U.S. Patent No. 5,386,567) in view of Clark (U.S. Patent No. 5,448,045) as applied to claim 3, and further in view of Sherer et al. (U.S. Patent No. 5,459,854).

Claims 4-6, 14-16 and 23-24 should be deemed allowable by virtue of their dependency to claims 1 and 10 for at least the reasons set forth above. Moreover, Sherer does not cure the deficiencies of Lien and Clark.

The Examiner asserts that Lien teaches loading the device driver to the operating system. The Examiner concedes that Lien is silent regarding the device driver being the correct device driver of the operating system. The Examiner asserts that Sherer discloses loading software based upon the architecture of the system included in the operating system. Further, the Examiner asserts that Script files such as Autoexec.bat and Config.sys are well known. Therefore, the Examiner asserts it would have been obvious to load the correct device driver for the operating system in order for the system of Lien to function properly.

**Claims 5 and 6**

Claim 5 recites "wherein the first partition is provided with the driver programs corresponding to the respective operating systems, and loads any one of the provided driver programs to the operating system **according to a kind of the operating system detected by the scripter file.**" Claim 6 recites "wherein the second partition loads any one of the stored environmental setting values according to a kind of the operation system detected by the scripter file."

However, as discussed above, the combination of Lien and Crossway does not teach the claimed partition.

Further, there is no teaching or suggestion that Autoexec.bat and Config.sys (scripter file as asserted by the Examiner) loads a provided driver program to an operating system according to an operating system detected by the scripter file. Further, there is no teaching or suggestion that a second partition loads environmental setting values according to an operating system detected by Autoexec.bat and Config.sys (scripter files as asserted by the Examiner).

For at least the above reasons, claims 5 and 6 should be deemed allowable.

**III. Rejection of claims 8-9 and 19-20 under 35 U.S.C. § 103**

Claims 8-9 and 19-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lien et al. (U.S. Patent No. 5,386,567) in view of Clark (U.S. Patent No. 5,448,045) and Sherer et al. (U.S. Patent No. 5,459,854) as applied to claim 1 and in further view of Hitz et al. (U.S. Patent No. 5,485,579).

Claims 7-9 and 19-20 should be deemed allowable by virtue of their dependency to claims 1 and 17 for at least the reasons set forth above. Moreover, Hitz does not cure the deficiencies of Lien, Clark and Sherer.

**Claim 8**

Claim 8 recites "wherein the operating system mounts the interface card by the virtual file system, and sets the driver programs and the environmental setting values stored in the interface card in one tree structure in a file system of the operating system."

The Examiner asserts that Hitz discloses multiple operating systems in which a virtual file system is used to allow for different operating systems. However, the Examiner has not established where an operating system mounts the interface card by the virtual file system.

Consequently, claim 8 should be deemed allowable. To the extent claim 19 recites similar elements, claim 19 should be deemed allowable for at least the same reasons.

**Claim 9**

Claim 9 recites "wherein the virtual file system analyzes a file format that the interface card has, and connects a file that the interface card has to the tree structure of the file format that the operating system has according to a result of analysis."

The Examiner asserts that Hitz discloses a tree structure. However, upon reviewing the reference, a tree structure as claimed does not appear to be disclosed in Hitz.

Consequently, claim 9 should be deemed allowable. To the extent claim 20 recites similar elements, claim 20 should be deemed allowable for at least the same reasons.



**IV. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

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CUSTOMER NUMBER

  
\_\_\_\_\_  
Ruthleen E. Uy  
Registration No. 51,361

Date: February 26, 2007